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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,202	11/25/2003	Johan Maria Frans Dries	Q77858	4231

7590 05/11/2007
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EXAMINER

BARON, HENRY

ART UNIT	PAPER NUMBER
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2609

MAIL DATE	DELIVERY MODE
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05/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/720,202	DRIES, JOHAN MARIA FRANS	
	Examiner	Art Unit	
	Henry Baron	2809	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓ | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/25/2003</u> ✓ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action**Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over P. Srisuresh, et al. Network Working Group; Request for Comments: 2663; August 1999, hereafter Srisuresh, in view of Inouchi, et al. (U.S. Patent Application 200060227780), hereafter Inouchi.
3. Regarding Claim 1, Srisuresh teaches conceptually, a method for transmitting signals from a source address in a first domain via a public domain to a destination address in a second domain. (See Srisuresh, page 11; section 4.3) using twice Network Address Translation (NAT).
4. Twice-NAT, as taught by Srisuresh, works as follows. When Host-A wishes to initiate a session to Host-X, it issues a Domain Name Server (DNS) query for Host-X. A DNS-Application Level Gateway (ALG) intercepts the DNS query, and in the response returned to Host-A the DNS-ALG replaces the address for Host-X with one that is properly routable in the local site (say Host-XPRIME). Host A then initiates communication with Host-XPRIME. When the packets traverse the NAT device, the source IP address is translated (as in the case of traditional NAT) and the destination address is translated to Host-X. A similar translation is performed on return packets coming from Host-X.
5. The Examiner notes that the Twice-NAT processing is done by the DNS-ALG router, a server network device with processor program products, e.g. is programmable. See Srisuresh, page 9; section 2.9.
6. In this manner, with regards to elements (a) and (b), Srisuresh teaches Host-XPRIME as a temporary address for Host-X, of a second domain, which is generated in the first domain for routing signals in first domain in response to a destination address in second domain. Then in response to temporary address e.g. Host-XPRIME, in the first domain, for signals leaving first domain address to a second domain, generating destination address, e.g. Host-X in the second domain.
7. Srisuresh does not teach elements (c) and (d) of Claim 1, e.g. the adding or encapsulation of a public source/destination address at the public-first domain boundary and subsequent removal of a public

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source/destination address at a public-second domain boundary. These elements, as discussed further below, constitute the method of tunneling, well known within the art. Further, Srisuresh does not explicitly teach element (e) of Claim 1, generating a temporary address in second domain for routing signals in the second domain.

8. By contrast, Inouchi cites the teachings of Srisuresh (1:[0003], and further teaches, as shortcoming of Srisuresh, that the method of Twice NAT needs a large capacity translation table (1:[0006]). To solve this problem Inouchi teaches that apart from the NAT technique, there is available a method of mutually connecting two domains by using the tunnel technique. (2:[0018]).
9. The Examiner notes that tunneling is a technology that enables a first network to transfer data via a second network's connection by encapsulating the first network's protocol within the packets carried by the second network. See, for instance, Williams, et al. US Patent Application 2005/0066035, 2: [0029], and further the applicant is directed to Simpson, IP in IP Tunneling, RFC 1853, October 1995, for a more in depth discussion of this technology, both of these references are cited here as evidence.
10. Inouchi, like Srisuresh, does not explicitly teach of generating a temporary address in second domain for routing signals in the second domain.
11. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify the Twice NAT teachings of Srisuresh with the tunneling teachings of Inouchi, and further, to generate a temporary address in second domain for routing signals in the second domain. This would have been obvious extension of the Srisuresh/Inouchi teachings and would be motivated for reasons of symmetry and compact processing. Generating a temporary or ghost address in second domain allows the destination terminal (the destination in the second domain) when it needs to respond to an incoming message from a host in the first domain to simply reverse the signal's source and destination address and symmetrically respond to an incoming signal. By doing so, the second domain destination terminal would not need to first signal the DNS-ALG router e.g. border units, in order to obtain a new temporary address of the host in the first domain. This would make inter-domain, e.g. private-to-private, communications more efficient, and cost effective.
12. With regards to Claim 2, the tunneling teaching of Inouchi teaches of forming a part of the outer header with public source and destination address of Inouchi to tunnel the inner header of Srisuresh Twice NAT signals (temporary destination address in domain 1; temporary source address in domain 2).
13. With reference to Claims 3, Srisuresh teaches that the Twice NAT servers are located at the private-public border in the first and second domain that are suited to make private-public network address

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modifications, (page 12, section 4.3, last paragraph). Examiner's note in above paragraph 9 of this correspondence.

14. With regards to Claims 4 and 6, the tunneling teachings of Inouchi teaches step (f) of generating a public source address in response to a first domain source address. Srisuresh modified Twice NAT teachings teaches step (g) of generating a destination address in the second domain in response to a public destination address. (Srisuresh page 11,12; section 4.3)
15. With reference to Claim 5, Srisuresh modified Twice NAT teachings and the tunneling teachings of Inouchi teaches of a border unit define first domain source address e.g. inner address and public source e.g. outer address and second domain border unit defines second domain destination address. (Srisuresh page 11,12; section 4.3)
16. With reference to Claims 7 and 8, processor programs that reside on border servers facilitate private source/destination NAT and tunneling functions (see Srisuresh page 12; section 4.3, fourth paragraph with reference to Twice NAT routers. Processor program products reside on routers). Also see Examiner's note in above paragraph 5 of this correspondence.
17. With reference to Claims 9 and 10, as noted above, the processor program product of the (border) server, as a programmable product device, can be configured to generate a temporary address in second domain in response to a source address in the first domain. See Examiner's note in above paragraph 5 of this correspondence.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Baron whose telephone number is (571) 270-1748. The examiner can normally be reached on 7:30 AM to 5:00 PM E.S.T. Monday to Friday.
2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bruce can be reached on (571) 272-2487. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the

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Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER